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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/646,985

08/21/2003

Philip W. Hammond

COTH-P03-504

1147

7590

10/30/2006

Patent Group
ROPES & GRAY
One International Place
Boston, MA 02110

EXAMINER

CHUNDURU, SURYAPRABHA

ART UNIT

PAPER NUMBER

1637

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/646,985

Applicant(s)

HAMMOND ET AL.

Examiner

Suryaprabha Chunduru

Art Unit

1637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. Applicants' response to the office action filed on August 17, 2006 is acknowledged.

Status of the Application

2. Currently claims 1, 3-11 are pending. Claim 1 is amended. Claim 2 is cancelled. All arguments and amendment have been fully considered and thoroughly reviewed and deemed persuasive in view of the amendment and for the reasons that follow. This action is made FINAL necessitated by Amendment.

New grounds of rejections necessitated by amendment

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henikoff et al. (Nucleic acids Res., Vol. 18, No. 10, pp. 2961-2966, 1990) in view of Szostak et al. (USPN. 6,214,553).

Henikoff teaches a method for removing the 3'-protruding ends a population of DNA molecules, wherein each DNA molecule in said population comprises an open reading frame (cloned DNA) and a 3' end region said method comprising

(a) providing a population of DNA molecules (providing double-stranded molecules generated by polymerase extension), each of said DNA molecules terminating in a 3' overhang upstream of the open reading frame and in a blunt end downstream of the open reading frame, wherein each said DNA molecule is double-stranded (see page 2961, col.2, paragraph 1 under materials and methods section, page 2962, col. 1, line 1-21);

(b) treating sequentially said DNA molecules first with an exonuclease III and then with a single-stranded nuclease under conditions to remove said 3'-untranslated region wherein the sequential treatment of said DNA molecules specifically remove the 3'untranslated region from the end downstream of the open reading frame (see page 2961, col.2, paragraph 1 under materials and methods section, page 2962, col. 1, line 1-21).

With regard to claim 3 the nuclease is Mung bean nuclease (see page 2962, col. 1, line 1-21).

However, Henikoff did not specifically teach removal of complete 3'-UTR but not the open reading frame, stop codon, cDNA produced by reverse transcription and said population of DNA molecules comprising at least 10^2 to 10^6 DNA molecules.

Szostak et al. teach a method of claims 1, 3-11, for selection of desired RNA and screening cDNA libraries, wherein Szostak et al. disclose that the method comprises generating a cDNA library, ligating a protein acceptor, and testing the interaction with particular molecules, wherein stop codons and 3-UTR regions are avoided by removal of stop codons and 3-UTR from the DNA sequences (see col. 3, line 16-26, col. 41, line 59-67, col. 42, line 1-9).

With regard to claim 5, Szostak et al. also teach that the DNA molecule is a cDNA produced by reverse transcription from an RNA sequence (see col. 4, line 27-31) and

With regard to claims 6-11, Szostak et al. teach that a population of DNA molecules comprises one or more DNA molecules, that includes more than 10^9 to more than 10^{14} DNA molecules (see col. 39-43, line 63-67, col. 5, line 1-3).

It would have been prima facie obvious to a person of ordinary skill in the art at the time the invention was made to modify the method for removing 3'UTR as taught by Henikoff with a step of including removal of 3-UTR but not the open reading frame, stop codons, and an addition of cDNA library comprising more than 10^{14} DNA molecules as taught by Szostak et al. for the purpose of screening cDNA libraries because Szostak et al. explicitly taught that "for screening cDNA libraries the stop codons and 3'-UTR are avoided if desirable (see col.42, line 3-9). Therefore one skilled in the art would have been motivated to combine the method of Henikoff with removal of 3'UTR , but not the open reading frame and removal of stop codons as and inclusion of cDNA libraries as taught by Szostak et al. because the ordinary artisan would have a reasonable expectation of success that inclusion of said parameters would result in screening of full-length cDNA in a large number of cDNA library that would aid in identifying new genes.

Response to Arguments:

4. With regard to the objection to the specification, Applicants' arguments are fully considered and the objection is withdrawn herein in view of the submission of sequence listing.
5. Applicants' arguments with regard to the rejection of claims 1-3 under 35 USC 102(e) as being anticipated by Ruffner et al., Applicants' arguments are fully considered and found persuasive in view of the amendment.
6. Applicants' arguments with regard to the rejection of claims 4-11 under 35 USC 103(a) as being obvious over Ruffner et al. in view of Szostak et al., Applicants' arguments and the amendment are fully considered and the rejection is withdrawn herein in view of the arguments and the amendment.

Conclusion

No claims are allowable.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suryaprabha Chunduru whose telephone number is 571-272-0783. The examiner can normally be reached on 8.30A.M. - 4.30P.M , Mon - Friday,

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on 571-272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Suryaprabha Chunduru
Primary Examiner
Art Unit 1637

Suryaprabha Chunduru
10/28/06
SURYAPRABHA CHUNDURU
PATENT EXAMINER

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PATENT EXAMINER 10/25/06